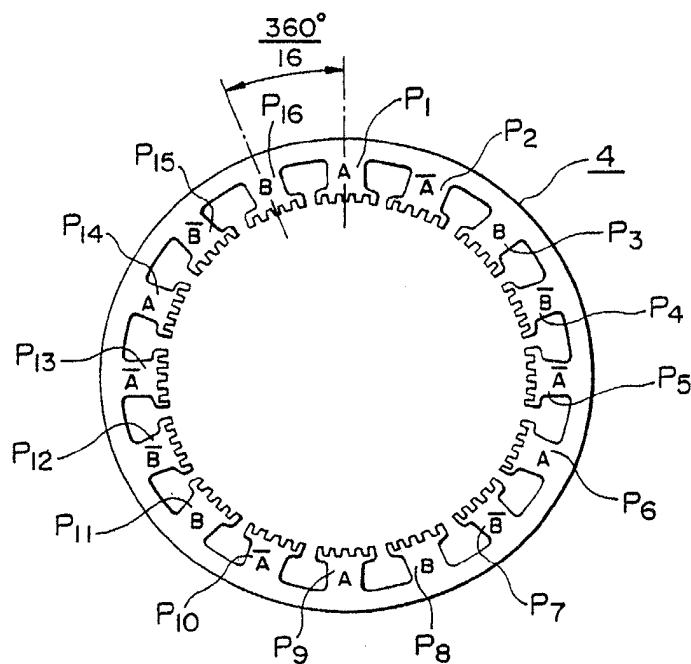
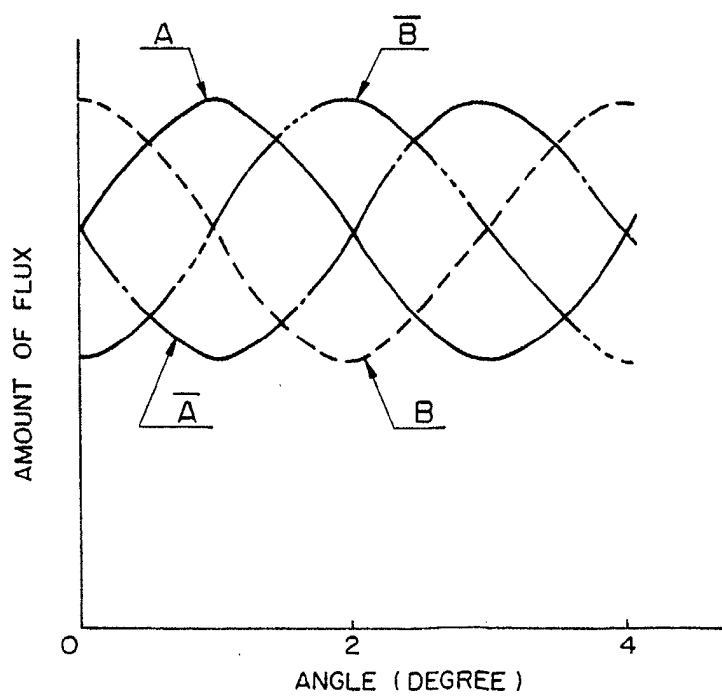
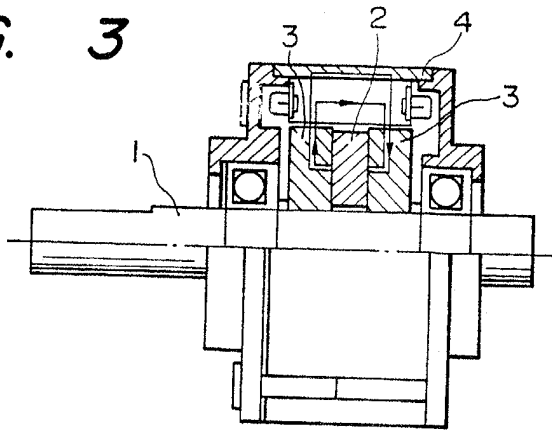
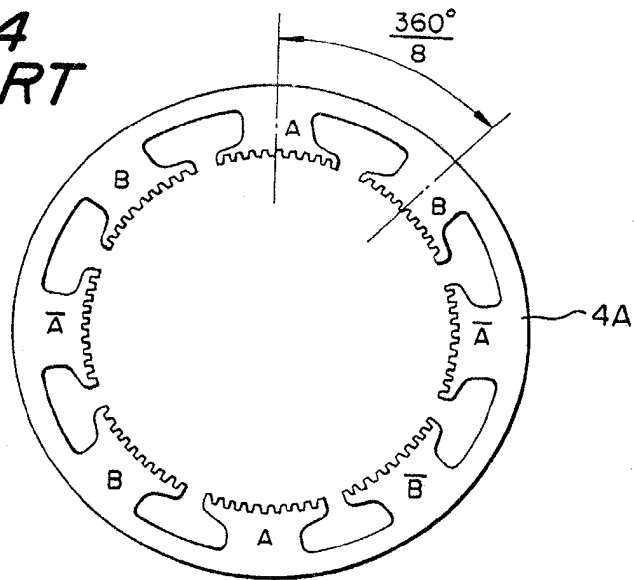


**FIG. 1****FIG. 2**

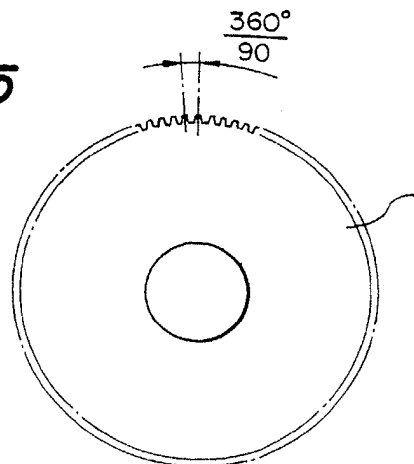
**FIG. 3**



**FIG. 4**  
**PRIOR ART**



**FIG. 5**



12

# EUROPEAN PATENT APPLICATION

21 Application number: **88106392.9**

51 Int. Cl. 5: **H02K 37/02, H02P 7/00**

22 Date of filing: **21.04.88**

30 Priority: **24.04.87 JP 99842/87**

53 Date of publication of application:  
**26.10.88 Bulletin 88/43**

84 Designated Contracting States:  
**DE FR GB**

88 Date of deferred publication of the search report:  
**16.05.90 Bulletin 90/20**

71 Applicant: **HITACHI, LTD.**  
**6, Kanda Surugadai 4-chome**  
**Chiyoda-ku Tokyo 101(JP)**

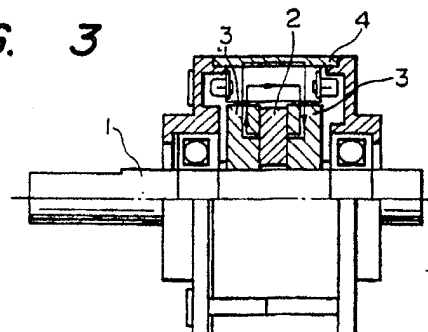
72 Inventor: **Hashimoto, Ichiro**  
**23-6, Hanayama-cho 1-chome**  
**Hitachi-shi Ibaraki 316(JP)**  
Inventor: **Ishizaki, Kosho**  
**19-2, Hanayama-cho 1-chome**  
**Hitachi-shi Ibaraki 316(JP)**  
Inventor: **Hayashida, Hiroshi**  
**2253-34, Hori-machi**  
**Mito-shi Ibaraki 310(JP)**  
Inventor: **Miyashita, Kunio**  
**45-15, Nishi Narusawa-cho 4-chome**  
**Hitachi-shi Ibaraki 316(JP)**

74 Representative: **Patentanwälte Beetz sen. -**  
**Beetz jun. Timpe - Siegfried -**  
**Schmitt-Fumian**  
**Steinsdorfstrasse 10**  
**D-8000 München 22(DE)**

54 **Low-speed high-torque motor.**

57 A large number of teeth are formed on the outer circumference of a rotor (1). A stator (2) is disposed around the rotor. The stator has multiple magnetic poles whose number is  $n$  times the number of phases. Each pole has formed on its surface a plurality of teeth at a pitch equal to the rotor tooth pitch. The teeth mounted on the adjacent magnetic poles are selected to be one-half or thereabout against to the rotor teeth for making the adjacent poles are to be opposite phases each other.

**FIG. 3**



EP 0 288 050 A3



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number

EP 88 10 6392

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	US-A-4 081 703 (E.W. MADSEN et al.) * column 4, line 32 - column 6, line 2; figures 1,2 * ---	1	H 02 K 37/18 H 02 K 37/02 H 02 P 7/00
D,X	EP-A-0 096 390 (MOTORNETICS CORP.) * page 12, lines 14-17 * ---	1	
X	FR-A-2 358 040 (N.V. PHILIPS GLOEILAMPENFABRIEKEN) * page 9, lines 6-19; figures 1,2 * -----	2	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			H 02 K 37/00 H 02 P 8/00
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 05-01-1990	Examiner WEIHS J.A.
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document I : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P0401)